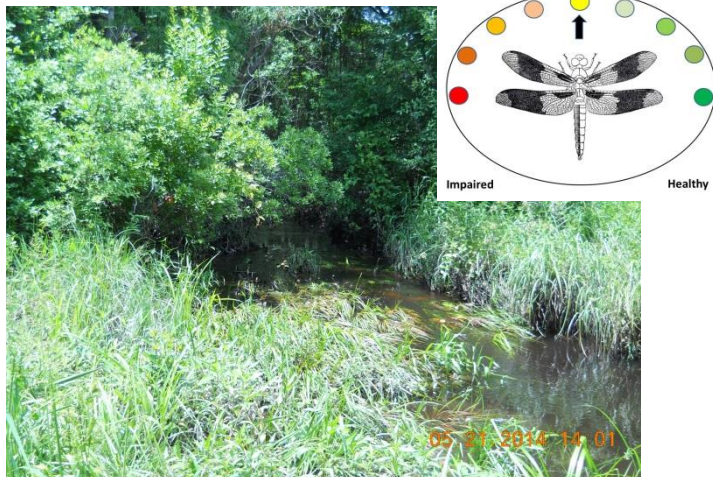


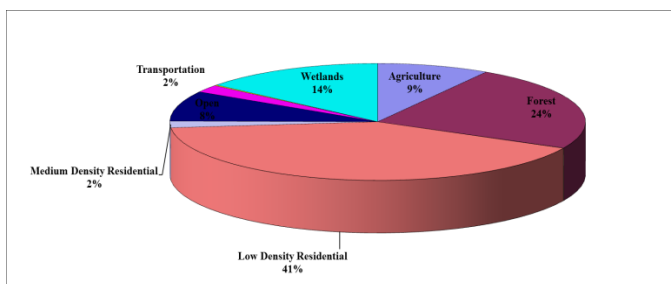
## Waterbody: Louvinia Creek



## Basin: St. Marks River

Louvinia Creek is an intermittently flowing creek located in eastern Leon County.

While the following pie chart shows the majority of the 3,521 acre watershed relatively undeveloped, Residential, agricultural, and transportation uses make up approximately 54% of the watershed. Increases in stormwater runoff, and waterbody nutrient loads, can often be attributed to these types of land uses.



### Background

Healthy, well-balanced stream communities may be maintained with some level of human activity, but excessive human disturbance may result in waterbody degradation. Human stressors may include increased inputs of nutrients, sediments, and/or other contaminants from watershed runoff, adverse hydrologic alterations, undesirable removal of habitat or riparian buffer vegetation, and

introduction of exotic plants and animals. State water quality standards are designed to protect designated uses of the waters of the state (e.g., recreation, aquatic life, fish consumption), and exceedances of these standards are associated with interference of the designated use.

### Methods

Surface water sampling was conducted to determine the health of Louvinia Creek and met the collection and analysis requirements of the Florida Department of Environmental Protection (FDEP).

### Results

According to FDEP requirements, Numeric Nutrient Criteria (NNC) (expressed as an annual geometric mean) cannot be exceeded more than once in a three year period. Due to low water conditions, four temporally independent samples per year have never been collected from this station. Even though staff was not able to collect the required amount of samples, some conclusions can be made. Based on the geometric average of three samples taken in 2014, total phosphorus (0.09 mg/L) and total nitrogen levels (0.72 mg/L) would meet the NNC criteria.

### Fecal coliforms

Fecal coliform levels were elevated during the February and July 2014 sampling event, exceeding the Class III criterion of fecal coliforms not exceeding the 400 Most Probable Number (MPN) in 10 percent of the samples (Figure 1).

### Metals

Louvinia Creek exceeded Class III water quality criteria for lead during the February 2014 sampling event. Relict anthropogenic sources such as leaded gasoline are most likely to be the cause of this exceedance.

[Click here for more information on metal levels in Leon County waterbodies.](#)

#### *Other Parameters*

Other water quality parameters appear to be normal for the area and no impairments were noted.

#### **Conclusions**

While sampling requirements were not met, total phosphorus and total nitrogen levels appear to meet the numeric nutrient criteria. Fecal coliform levels during the February and July 2014 sampling event were elevated and exceeded the Class III criterion. Louvinia Creek exceeded Class III water quality criteria for lead during the February 2014 sampling event. Other water quality parameters appear to be normal for the area and no other impairments were noted.

Thank you for your interest in maintaining the quality of Leon County's water resources. Please feel free to contact us if you have any questions.

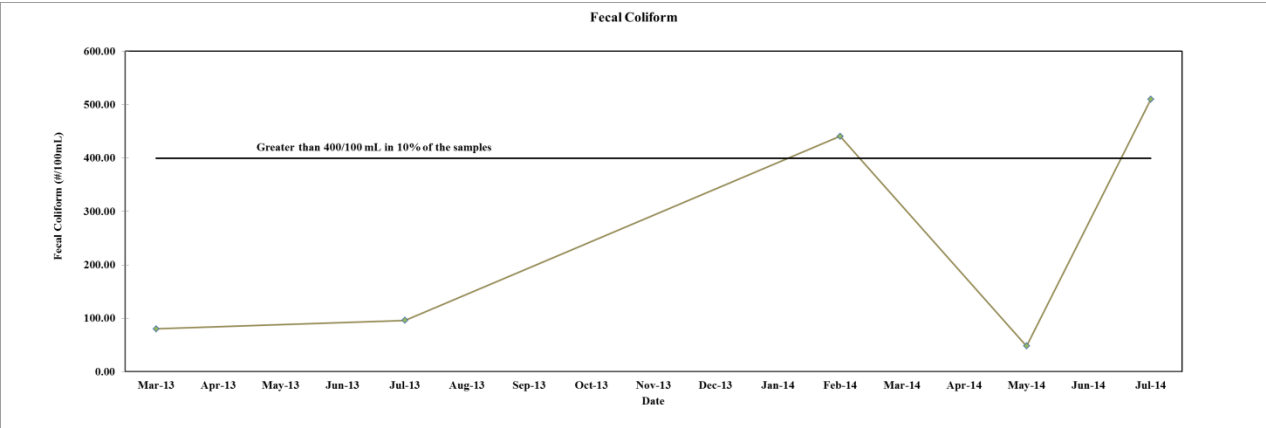
#### **Contact and resources for more information**

[www.LeonCountyFL.gov/WaterResources](http://www.LeonCountyFL.gov/WaterResources)

[Click here to access the results for all water quality stations sampled in 2014.](#)

[Click here for map of watershed – Sample site LC at WW.](#)

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**Figure 1.** Fecal coliform results for Louvinia Creek.